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Stroia et al.

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(54) **VARIABLE SPRAY ANGLE INJECTOR ARRANGEMENT**

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F02M 63/0012; F02M 63/0031; F02M
63/0043; F02B 23/0669; F02B 23/0645;
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(71) Applicant: **Cummins Inc.**, Columbus, IN (US)

(72) Inventors: **Bradlee J. Stroia**, Columbus, IN (US);
Lester L. Peters, Columbus, IN (US);
David L. Buchanan, Westport, IN
(US); **Rajesh K. Garg**, Columbus, IN
(US); **Wei Ning**, Columbus, IN (US)

USPC 237/5, 533.2, 533.3, 533.4
See application file for complete search history.

(73) Assignee: **Cummins Inc.**, Columbus, IN (US)

(*) Notice: Subject to any disclaimer, the term of this
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Primary Examiner — Grant Moubry

(74) *Attorney, Agent, or Firm* — Faegre Baker Daniels
LLP

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(58) **Field of Classification Search**

CPC F02M 61/184; F02M 61/045; F02M

(57) **ABSTRACT**

An injector, comprising, an injector body comprising, an inner wall that defines an injector cavity for fluid, at least one inlet channel into the injector cavity, and at least one outlet channel from the injector cavity, a plunger that defines at least one passageway between the injector cavity and the at least one outlet channel, the plunger being movable longitudinally in the injector cavity between at least: a first open arrangement in which the at least one passageway is positioned to direct fluid into the at least one outlet channel at a first position, and a second open arrangement in which the at least one passageway is positioned to direct fluid into the at least one outlet channel at a second position different from the first position.

19 Claims, 11 Drawing Sheets

